Logic and Argument

## WHAT IS AN ARGUMENT?

A good argument will include:

* a thesis or claim that declares the writer's position on the problem at hand;
* an acknowledgment of other perspectives;
* a set of clearly defined premises that illustrate the argument's line of reasoning;
* evidence that validates the argument's premises;
* a conclusion that convinces the reader that the argument has been soundly and persuasively made.

If your paper has these essential features, then you've probably presented a sound argument. Of course, "probably" isn't good enough for the budding scholar. How can you be *sure* that your argument is sound?

## TOULMIN'S ANALYSIS OF ARGUMENT

One way of assessing your the validity of your argument is via a method created by Stephen Toulmin, a philosopher and educator who committed his career to the analysis of moral reasoning.  His method is designed so that we might assess the validity of any argument that we encounter.  However, the method can also be used to determine the validity of your own work.

Toulmin classified six important elements of argument.  The three most important (and the ones we will consider here) are the **claim**, **grounds**, and**warrants**.  The **claim** is what you are asserting or proposing; the **grounds** include the evidence that supports your claim; and the **warrant** is what permits a piece of evidence to stand in support of a given claim.  Warrants are perhaps the most "slippery" aspects of argument, in that they often comprise widely-held beliefs and assumptions that may or may not be stated explicitly.

REVIEWING THE GROUNDS OF YOUR ARGUMENT

In crafting an argument, you will make a claim and gather evidence to convince your reader that this claim is valid.  Once you've collected the evidence or reasons that support your claim, you'll want to consider whether that evidence is sufficient.  In other words, you'll want to be sure that your evidence warrants the claim you're trying to make.  You can begin this process by assessing your use of evidence.

HAVE YOU SUPPRESSED EVIDENCE?

Evidence that doesn't serve your argument must be reckoned with, not ignored. Make sure that you aren't dismissing evidence that challenges or undermines your argument.

HAVE YOU MANIPULATED EVIDENCE?

Sometimes we dig up information that can only loosely support our point of view. But we need that information in order to make our argument stand. Is it fair to stretch the information to suit our own purposes? Absolutely not - unless you are going to acknowledge the stretch to the reader, and leave it to him to decide whether your stretch is a fair one.

DO YOU HAVE ENOUGH EVIDENCE?

Review the main points of your argument and consider whether or not each point is convincing based on the evidence alone. Do you find yourself relying on your rhetoric alone to make a point? If you are, you may need to return to your sources for evidence.

DO YOU HAVE TOO MUCH EVIDENCE?

Take a look at your paper. Do your quoted passages outweigh your own prose? If so, perhaps your argument has been buried under the arguments of others. It's likely, too, that your reader will find so much information difficult to wade through. She'll be looking hard for an argument that may in fact be impossible to find.

IS YOUR EVIDENCE CURRENT? CREDIBLE?

It's not that you can't use dated sources in a paper, it's simply that you run the risk of not considering more current information that might challenge your point of view. You've also got to make sure that your evidence comes from a credible source. Remember the dictum, "You can't believe everything you read." This is especially true of information you find online, where anyone can post anything, sometimes without the slightest concern for its validity.

AND FINALLY, IS YOUR EVIDENCE SUFFICIENT TO WARRANT YOUR CLAIM?

Consider why you believe your evidence to be sufficient.  Is that evidence based on research?  Scholarship?  Or is it based on an assumption or commonly held belief?  If the latter, you will need to bring this assumption into the light.  Sometimes you'll need to provide additional backing (Toulmin's fourth element of argument).  The two remaining elements include qualifiers, which determine the conditions under which an argument is true, and rebuttal, which determines the conditions under which an argument is not true. It's important to consider these conditions as well.

AVOIDING LOGICAL FALLACIES

Finally, you may want to consider whether your arguments contain any logical fallacies, or mistakes in reasoning.  Some common fallacies are defined below.

1. **Hasty Generalization:** A generalization based on too little evidence, or on evidence that is biased. Example: All men are testosterone-driven idiots. Or: After being in New York for a week, I can tell you: all New Yorkers are rude.
2. **Either/Or Fallacy:** Only two possibilities are presented when in fact several exist. Example: America: love it or leave it. Or: Shut down all nuclear power plants, or watch your children and grandchildren die from radiation poisoning.
3. ***Non Sequitur:***The conclusion does not follow logically from the premise. Example: My teacher is pretty; I'll learn a lot from her. Or: George Bush was a war hero; he'll be willing to stand tough for America.
4. ***Ad Hominem:*** Arguing against the man instead of against the issue. Example: We can't elect him mayor. He cheats on his wife! Or: He doesn't really believe in the First Amendment. He just wants to defend his right to see porno flicks.
5. **Red Herring:** Distracting the audience by drawing attention to an irrelevant issue. Example: How can he be expected to manage the company? Look at how he manages his wife! Or: Why worry about nuclear war when we're all going to die anyway?
6. **Circular Reasoning:** Asserting a point that has just been made. Sometimes called "begging the question." Example: She is ignorant because she was never educated. Or: We sin because we're sinners.
7. **False Analogy:** Wrongly assuming that because two things are alike in some ways, they must be alike in all ways. Example: An old grandmother's advice to her granddaughter, who is contemplating living with her boyfriend: "Why should he buy the cow when he can get the milk for free?"
8. ***Post Hoc, Ergo Propter Hoc:*** The mistake of assuming that, because event *a* is followed by event *b,* event *a* caused event *b.* Example: It rained today because I washed my car. Or: The stock market fell because the Japanese are considering implementing an import tax.
9. **Equivocation:** Equates two meanings of the same word falsely. Example: The end of a thing is its perfection; hence, death is the perfection of life. (The argument is fallacious because there are two different definitions of the word "end" involved in the argument.)

- See more at: <https://writing-speech.dartmouth.edu/learning/materials-first-year-writers/logic-and-argument#Toulmin>

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